

RIPARIAN BUFFER FIELD FORM

SITE IDENTIFICATION

Site ID _____ Stream/Pond Name: _____ Field Staff: _____
 Town: _____ Subbasin: _____ Ownership: _____
 Aerial Photo(s) ID: _____ USGS Quad: _____ Date: _____
 Area (sf): _____ Length: _____ Width: _____
 Nearest Rd: _____ GPS (NAD 83) N _____ W _____
 DEPWO Classification of Stream: _____
 Width of Stream (ft.): _____ Cold Water Stream: _____
 General Site Conditions: _____

Current Uses/Activities within Potential Restoration Site

Parking Lot _____ Junkyard _____ Abandoned _____ Industrial _____ Dumping _____ Borrow Area _____
 Fill _____ Excavation _____ Active Agr. _____ Abandoned Agr. _____ Other _____
 Hazardous Waste Sites or Potential Sources of Contamination: Y / N
 Comment: _____

Total Length of Buffer _____ Average Width of Buffer _____
 Fragmentation by Development: None _____ Some _____ Moderate _____ Severe _____
 % Buffer Developed: < 5 _____ 6 – 25 _____ 26 – 50 _____ > 51 – 75 _____ > 75 _____
 Type(s) of Development _____
 Buffer Potentially Connects to Habitat Island (> 5 acres): Upstream: Yes _____ No _____ Downstream : Yes _____ No _____

Existing Vegetation Within Restoration Site Cover Types Present

Wetland: Forested _____ Scrub-Shrub _____ Emergent _____ Open Water _____
Upland: Forest _____ Shrubland _____ Old field _____ Grassland _____ Pasture _____ Agricultural Field _____
 Turf _____ Sparsely Vegetated _____ Unvegetated _____ Developed _____
 Predominant Cover Types: _____
 Average % Cover : Tree _____ Shrub/Sapling: _____
 Herbaceous _____ Developed _____

Dominant Species	Abundance (% Cover of Area)

Invasives/Exotics within Buffer:

Phragmites P.Loosestrife E. Buckthorn Honeysuckle Knotweed

Other: _____

Comments: _____

Wildlife Indicators Within Buffer:

Beaver Pond Snags Stumps Sandy Banks Rookery Vernal Pools
Logs Cavities Burrows Mud flats Sandy Beach Nest boxes
Islands Persistent open waters in Winter Other _____

Wildlife Observed: _____

ADJACENT AREA DESCRIPTION

Surrounding Land Use (within 150 feet) of Restoration Area

A. Same Side of River

Developed	%		Undeveloped	%
Residential			Upland Forest	
Dense (< 1/2 acre lots)			Deciduous	
Moderate (1/2 to 1 acre lots)			Mixed	
Light (> one acre lots)			Coniferous	
Commercial			Wetlands (Palustrine)	
Industrial			Forested	
Agricultural			Scrub-Shrub	
Manicured Park or Turf			Emergent	
Abandoned (Brownfield)			Surface Waters	
Other:			Abandoned Field	

B. Opposite Side of River

Developed	%		Undeveloped	%
Residential			Upland Forest	
Dense (< 1/2 acre lots)			Deciduous	
Moderate (1/2 to 1 acre lots)			Mixed	
Light (> one acre lots)			Coniferous	
Commercial			Wetlands (Palustrine)	
Industrial			Forested	
Agricultural			Scrub-Shrub	
Manicured Park or Turf			Emergent	
Abandoned (Brownfield)			Surface Waters	
Other:			Abandoned Field	
			Other	

Wildlife Indicators within 150 feet of Restoration Site (same side of river)

Beaver Pond Snags Stumps Sandy Banks Rookery Vernal Pool
 Logs Cavities Burrows Mud flats Sandy Beach Nest boxes
 Islands Persistent open waters in Winter Other _____
 Wildlife Observed: _____

Invasives/Exotics within 150 feet of Restoration Site (same side of river):

Shrubs: Phragmites P.Loosestrife E. Buckthorn Honeysuckle Knotweed Other
 Aquatic: Milfoil Chestnut Fanwort Pondweed Naiad Hydrilla Other
 Vegetation Comments: _____

Nonpoint Pollution within 150 feet of Restoration Site (same side of river))

Ag/crops Ag/tilled Ag/animals Impervious (roadways, parking lots, etc) Septic
CSO's Golf Course Construction Sites Roadway Outfalls Industrial Outfalls
Closest Roadway Eroding Trails:

SITE ANALYSIS

Impairments (circle the appropriate value for each factor)

Factor	Low	Medium	High
Points	1	2	3
Coverage of Exotics	< 5%	6-25%	>25%
Exotic/Invasive Plants	Few (1 species)	Some (2-3 species)	Many (>3 species)
Development within Buffer (all area without natural vegetation)	< 5 %	6-25%	>25 %
Development of Adjacent Habitat	Adjacent areas largely undeveloped (< 10 %)	Adjacent Areas Moderately Developed (6 – 25 %)	Adjacent Areas Heavily Developed (> 25 %)
Extent of Fragmentation by Development (gaps > 50 feet)	Few or no gaps.	Moderate Fragmentation	Severe Fragmentation
% of Buffer Composed of Fill Material	< 5%	6-25%	>25%
Erosion	Little (visible, but no impact observable)	Moderate (visible with impact visible)	Considerable (clear impact/ degradation)
Sedimentation	Little (visible, but no impact observable)	Moderate (visible with impact visible)	Considerable (clear impact/ degradation)
Channelized flow through buffer (short circuiting)	Little or none	Moderate	Severe (filtering effects of buffer largely short circuited)
Buffer Isolated from stream by berm or wall	Buffer not isolated	<10% isolated	>10 % isolated
Illegal Dumping	Little or none	Some	Considerable > 10 % surface area)
Hazardous Waste Sites within or adjacent to the site	None	Localized Contamination within the Site	Widespread Contamination within the Site
Non-Point Source Pollution Sources	0-1 Sources	2-3 Sources	>3 Sources
Recreational use/trails	No trails, little use	Trail, some use	Trail, heavy use
Off-Road Vehicle Use	None	Some	Heavy

Total Score for Impairments =
Impairment Rank: (circle)

Low 15-24

Medium 25-35

High 36 -45

Description of Impairment:

Potential Solutions:

Potential Benefits of Restoration

- Circle all benefits that apply to the potential restoration site and enter into score box.
- Add up total number of circles to determine ranking: Few 0-10, Some 11-20, Many 21-31.
- Apply ranking to the Quality of Restoration Opportunity Table on page 7 of this form.

☐

Water Quality (including nutrient/toxicant reduction):

(In the box to the left, note the total number of selections that apply to the restoration site)

1. Site is upstream of a public water supply.
2. The restored site will have or can be designed to have a seasonally flooded water regime.
3. Once restored the site will have a low gradient (is relatively flat)
4. Once restored Channel flow through the riparian buffer will be minimal or can be designed to overtop the banks of a channel and come into contact with the surrounding riparian buffer.
5. Site could be restored to support dense or woody vegetation.
6. Restoration will aid in buffering discharge from non point sources containing sediment, nutrients or toxicants.
7. Restoration will eliminate or improve the impact of point source discharge(s) to the site.
8. Other _____

☐

Fisheries/Wildlife Habitat: *(In the box to the left, note the total number of selections that apply to the restoration site)*

1. Restored site will increase the diversity of natural habitat types in the area.
2. Restored site improves the connectivity of one wildlife habitat area to another by improving or widening a corridor between the two or more unaffected sites.
3. Site is located within or adjacent to an identified habitat for rare species or a priority natural community as identified in the 1999-2001 Massachusetts Natural Heritage Atlas.
4. Restored site will provide waterfowl nesting/brood habitat.
5. Once the site is restored the adjacent stream will provide trout habitat (native or stocked)
6. Restored site may provide fish spawning/ juvenile fish habitat (seasonally flooded areas).
7. Restored overstory may reduce stream temperature (streams < 30 ft. wide only).
8. Restored site may contain or is adjacent to a vernal pool
9. Restoration of buffer will reduce instream sedimentation.
10. Restoration of buffer may improve instream structure (provide source of large woody debris currently not available).
11. Other _____

- ☐ **Flood Control:** *(In the box to the left, note the total number of selections that apply to the restoration site)*
1. Site watershed contains a high degree of impervious surface.
 2. Site has a low gradient (flat) or could be restored to a low gradient riparian buffer to increase flood storage potential.
 3. Once restored the site would contain or have the potential to contain a high density of vegetation.
 4. Other _____

- ☐ **Recreation:** *(In the box to the left, note the total number of selections that apply to the restoration site)*
1. Site is part of or adjacent to a recreation area, park, forest or refuge and is accessible to the public for recreation.
 2. Fishing is currently available or will be available on or adjacent to the site
 3. Hunting could be permitted on the site after restoration
 4. Hiking could occur within the site after restoration.
 5. Once restored the site could provide opportunities for wildlife observation and study
 6. Once restored the site will have a High visual/aesthetic quality
 7. Off-road public parking could be available at the potential recreation site.
 8. Other _____

TOTAL NUMBER OF POTENTIAL BENEFITS =

Ranking = _____ *(Few 0-10, Some 11-20, Many 21-31)*

Indicators of Potential Negative Impacts of Restoration

- Check all boxes that apply to the potential restoration site.
- Add up total number of check marks to determine ranking: Few 1-2, Some 3-5, Many 6-7.
- Apply ranking to the Quality of Restoration Opportunity Table found on page 7 of this form.

- ☐ Existing fisheries or wildlife habitat will be adversely impacted by the restoration project.
- ☐ Historic Structures will be impacted as a result of the project.
- ☐ Rare Species and/or their habitat will be adversely impacted by the project.
- ☐ Agricultural land will be lost because of the restoration project.
- ☐ Industrial/Commercial use of the area will be adversely impacted by the project
- ☐ The restoration project could increase risk of local flooding.
- ☐ Other _____

TOTAL NUMBER OF POTENTIAL NEGATIVE IMPACTS =

Ranking = _____ *(Few 1-2, Some 3-5, Many 6-7)*

Potential Indicators of Cost

- Check all boxes that apply to the potential restoration site.
- Add up total number of check marks and multiply by the appropriate size factor rating (SFR) for the site:
Site Size 1-5 acres = 1 SFR, 6-10 acres = 2 SFR, 11+ acres = 3 SFR.
- Insert this number into the appropriate ranking: Low 0-6, Medium 7-14, High 15-27
- Apply ranking to the Quality of Restoration Opportunity Table found on page 6 of this form.

- ☐ **Ownership** (e.g., site is located on private property)).
- ☐ **Construction Access** (e.g., access is difficult or site is more than 100 ft. from existing road).
- ☐ **Regrading** (e.g., substantial regrading work is necessary for the potential restoration project).
- ☐ **Fill Placement** (e.g., substantial amount of fill or debris must be removed from the site).
- ☐ **Revegetation** (e.g., a significant planting and/or seeding effort is necessary for the project.)
- ☐ **Maintenance Needs** (e.g., the potential restoration site will require regular maintenance work following the completion of the project).
- ☐ **Removal of Structures** (e.g. on-site structures must be removed with heavy machinery).
- ☐ **Hazardous Waste** (e.g. on-site hazardous waste clean-up will be required as part of restoration activities).
- ☐ **Other** _____

TOTAL NUMBER OF POTENTIAL INDICATORS OF COST =

Ranking = _____ (Low 0-6, Medium 7-14, High 15-27)

Quality of Restoration Opportunities (circle)

Factor*	Low	Medium	High
	1	2	3
Potential Benefits	Few	Some	Many
Potential Negative Impacts	Many	Some	Few
Potential Costs	High	Medium	Low
Length of Restoration Site	Small (250-500 feet)	Medium (501-1,500 feet)	Large (> 1,500 feet)

Total Score for Restoration Opportunities =

Restoration Opportunity Rank: (circle) Low 4 - 6, Medium 7 - 9, High 10 - 12

Notes:
